

Reply To: 3420

Date: FEB 12 1986

Subject: Western Spruce Budworm, Sandia Peak Ski Area

To: Forest Supervisor, Cibola National Forest

On October 3-4, 1985, entomologists Terry Rogers and Donald Owen, Forest Pest Management, conducted a western spruce budworm (WSB), Choristoneura occidentalis Free., ground survey on the Sandia Peak Ski Area (SPSA), Sandia RD, Cibola National Forest. The objectives of this ground survey were to obtain information on:

1. The extent and severity of the current WSB defoliation.
2. WSB egg mass densities to predict 1986 defoliation trends.

This letter documents the results of this survey and presents recommendations for WSB management.

Briefly, the survey results, and observations by Terry and Don, indicate that WSB-caused defoliation, although apparent, is very low and insignificant at the present time. Defoliation, which was observed in 4 of the 22 stands sampled (Table 1), ranged from moderate (>35 to 65 percent of the new growth defoliated) to heavy (>65 percent of the new growth defoliated) and occurred in stands predominantly composed of Douglas-fir and white fir. Several of these stands were observed defoliated in 1984 (Re: 3420 ltr. of 11/19/84). In stands primarily composed of spruce and true firs, defoliation was either insignificant (<5 percent of the new growth defoliated) or not apparent.

On the basis of the egg mass data collected (Table 1), we predict WSB infestations on the SPSA will continue to cause minor amounts of defoliation again in 1986. Defoliation will be limited in area and mainly confined to stands predominantly composed of Douglas-fir and white fir. WSB egg mass density estimates, collected from 6 stands (Stands 9, 12, 32, 33, 36, and 44, Figure 1), ranged from 3.2 to 29.9 egg mass per square meter of foliage) and averaged  $9.9 \pm 4.1$  overall. According to these data, 1986 defoliation will be light (>5 to 35 percent of the new growth defoliated) throughout the majority of the areas. However, more heavily infested stands may experience moderate levels of defoliation. In less susceptible stands, composed predominately of spruce and true firs, budworm-caused defoliation is expected to remain insignificant and undetectable again in 1986.

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Because current WSB defoliation damages and population densities on the SPSA are at low levels and are not an immediate threat to visual quality, we recommend no suppression actions be taken against the WSB at the present time. If you or your staff should have any questions concerning this report or the WSB in general, we will be glad to discuss this situation further.

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Director of Forest Pest Management

Enclosures (2)

T.J.Rogers:dtk:2-11-86



Table 1.--1985 WSB average egg mass densities and defoliation trends predicted for 1986, Sandia Peak Ski Area, Sandia Ranger District, Cibola National Forest.

Stand	Average Egg Mass Densities per $\mu\text{m}^2$ of Foliage	Estimated 1985 Defoliation	Defoliation Trends Predicted for 1986
2	0	Undetectable	Undetectable
3	0	Undetectable	Undetectable
4	0	Undetectable	Undetectable
5	0	Undetectable	Undetectable
7	0	Undetectable	Undetectable
9	8.4	Undetectable	Light
10	0	Undetectable	Undetectable
12	6.2	Undetectable	Light
13	0	Undetectable	Undetectable
17	0	Undetectable	Undetectable
19	0	Undetectable	Undetectable
20	0	Undetectable	Undetectable
21	0	Undetectable	Undetectable
22	0	Undetectable	Undetectable
25	0	Undetectable	Undetectable
27	0	Undetectable	Undetectable
28	0	Undetectable	Undetectable
32	29.9	Heavy	Moderate
33	5.4	Moderate	Light
35	0	Moderate	Undetectable
36	6.0	Undetectable	Light
44	3.2	Heavy	Light

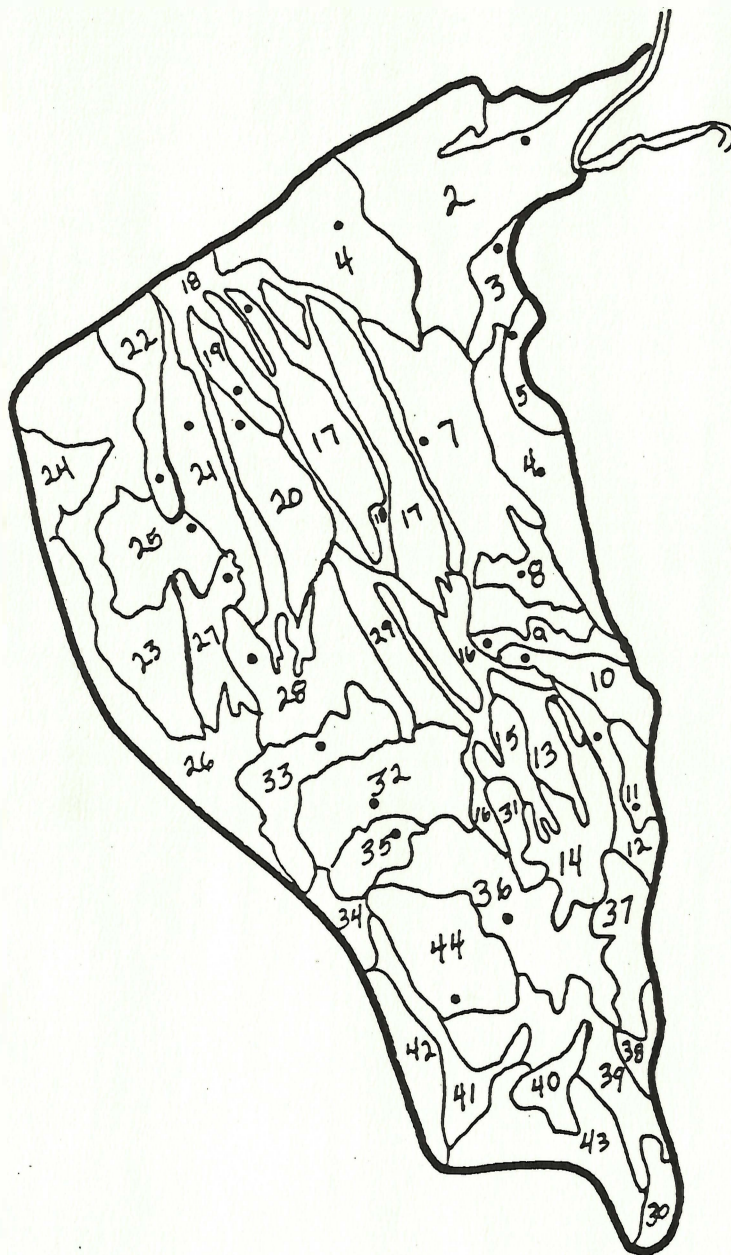


Figure 1.--Stands and points sampled on the Sandia Peak Ski Area,  
Ranger District, Cibola National Forest.